Remarks

Claims 26-45 were pending.

Claims 26-45 are cancelled.

Claims 46-62 are new.

The application now contains claims 46-62.

Applicants have amended to the claims to focus on particular features of the invention, but reserve the right to pursue any deleted material in subsequent divisional applications. Material from withdrawn claims does not appear in the new claims.

Claim 46, and dependent claims 47-53, are supported by now cancelled claims 26-28, the aromatic substituents phenyl, biphenyl, naphthyl and pryidyl are selected from page 33 of the specification, lines 6-7 and 22, and the components a-e of the device are found in the specification on page 35 lines 13-18. Support for the formula IV of claim 53 is found in the specification near the top of page 14.

Support for claim 54 is found in the specification on page 35 lines 23-26.

Claim 55, and dependent claims 56-62, are supported by now cancelled claims 37-39, the aromatic substituents phenyl, biphenyl, naphthyl and pryidyl are selected from page 33 of the specification, lines 6-7 and 22. Support for the formula IV of claim 53 is found in the specification near the top of page 14.

No new matter is added.

The elected tris-terphenyl pyrimidine is encompassed by each of the new claims.

Objections

The Specification is objected to for having portions which are not fully readable. Applicants have enclosed a substitute specification, without the claims section since the claims have been rewritten, to remedy the problem. Claim 33 is also objected to, however claim 33 is deleted.

Applicants therefore kindly ask that the objections be withdrawn.

Rejections

Applicants respectfully submit that the new claims are free of the errors that were the basis for the present 35 USC 112 second paragraph rejections and kindly ask that the rejections be withdrawn.

Claims 27, 28, 37 and 38 are rejected under 35 USC 102(b) as anticipated by Ise et al., US 2002/0028329.

Claims 26 and 37 are rejected under 35 USC 102(b) as anticipated by Sakon et al., US 5,077,142.

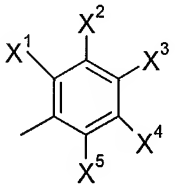
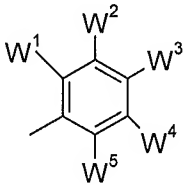
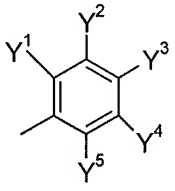
Claims 26 and 37 are rejected under 35 USC 102(b) as anticipated by Uchida et al., EP 0926216.

Claims 37-39 are rejected under 35 USC 102(b) as anticipated by Bajic et al., in Molecules, Vol. 6, p 477-480 (2001).

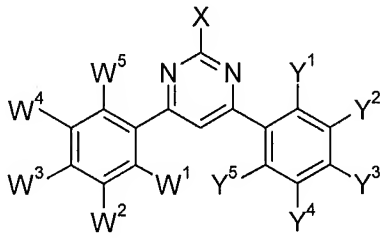
Claims 37-39 are rejected under 35 USC 102(b) as anticipated by Schomaker et al., in J. Org. Chem., Vol. 66, p 7125-7128 (2001).

Applicants respectfully traverse the rejections.

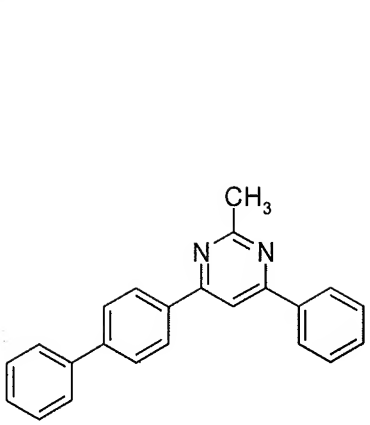
Instantly amended claims 46 and 55 limit the instant pyrimidines to a compound of formula I wherein V is H,

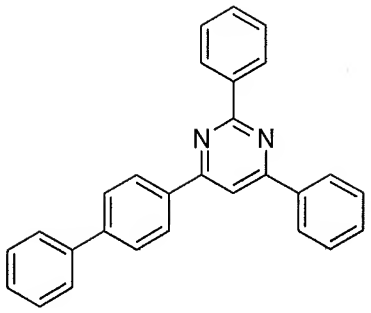
X is C_1-C_{18}alkyl or  , W is  and Y is 

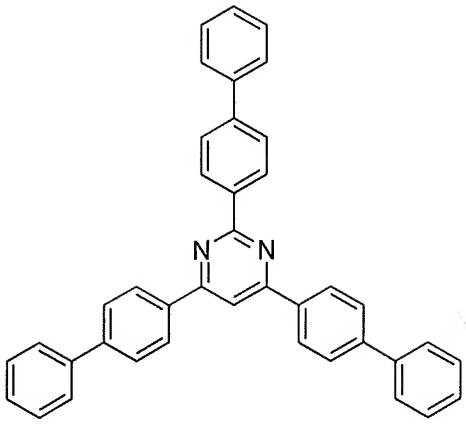
That is, a compound of the formula:



Further, at least one of the groups W^1 to W^5 or Y^1 to Y^5 is a substituted or unsubstituted phenyl, biphenyl, naphthyl or pryidyl. Thus, the simplest pyrimidines of the invention is, e.g.,



,


or


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The compounds shown in Ise are substituted on the pyrimidine ring by heterocycles, not phenyl rings. The compounds shown in Sakon do not have further aromatic or pyridyl substitution on the phenyl groups W or Y. The compound cited in Uchida is substituted by hydrogen at W or Y. The substituents at W, X and Y in Bojic are phenyl but none of the phenyls therein are substituted by phenyl, biphenyl, naphthyl or pryidyl. The compounds cited in Schomaker also lack a phenyl substituent further substituted by phenyl, biphenyl, naphthyl or pryidyl.

Applicants therefore respectfully submit that there is no anticipation of the instant claims by the cited art and kindly ask that the 35 USC 102(b) rejections be withdrawn.

Claims 26-19 and 37-39 are rejected under 35 USC 103(a) over Sakon et al., US 5,077,142 in view of Schomaker et al., in J. Org. Chem., Vol. 66, p 7125-7128 (2001).

Applicants respectfully traverse the rejections.

In the present Action, the Examiner lays out how one might piece together some of the instant pyrimidines from the generic disclosure of Sakon and how Schomaker discloses procedures which would be useful in the preparation of such compounds.

However, Applicants respectfully note that while Sakon generically discloses millions of compounds, and provides specific structures for 174 (wherein none of the 174 overlap with the instant pyrimidines), data is presented for only 10. In order to arrive at the instant pyrimidines from the compounds specifically listed in Sakon, one has to select pyrimidine from the dozens of core aromatics B found in columns 3-6 of Sakon and substitute the pyrimidine with at least one di-aromatic

moiety, e.g., biphenyl or pyridylphenyl. Applicants point out that there are no examples of any heterocycle substituted by a di-aromatic moiety, such as, biphenyl, terphenyl or pyridylphenyl as in the instant invention.

Applicants respectfully point to the Declaration of Schafer already of record which clearly shows that the pyrimidines of the invention surprisingly provide significantly higher efficiencies than the analogous triazines. This is despite the apparent structural similarities between the pyrimidines and triazines. Applicants thus take the position one can not simply select randomly from the B' and AR lists of Sakon to create a compound with predictable properties and that there is no guidance in Sakon that would direct one to make the instant pyrimidines from the millions of compounds of the generic disclosure.

Although the Declaration provides data for only a few compounds, Applicants respectfully maintain that the data can be considered commensurate in scope with the limited nature of the compounds claimed. For example, the compounds of the declaration are tris-biphenyl and tris-terphenyl pyrimidines. Each of the pyrimidines of the instant claims is a tri-substituted pyrimidine bearing at least two substituents that are phenyl rings and at least one of which is further substituted by phenyl, biphenyl, naphthyl or pryidyl. In claims 49-53 and 58-62 each of the pyrimidines is substitituted by three phenyl groups at least one of which is further substituted by phenyl, biphenyl, or pryidyl, and in claims 52, 52, 61 and 62, each phenyl substituent is further substituted by phenyl, biphenyl or pryidyl. A limited number of simple variations are also found in the claims.

Thus only a limited number of compounds bearing relatively simple substituents are claimed which are more in line with the declaration than previously.

Applicants therefore respectfully submit that as the pyrimidines of the instant claims are novel and are shown to have surprisingly advantageous properties that can not be predicted from the art, that the rejections of claims 26-19 and 37-39 under 35 USC 103(a) over Sakon et al., US 5,077,142 in view of Schomaker et al., in J. Org. Chem., Vol. 66, p 7125-7128 (2001) as they might apply to the instant claims are addressed and are overcome and kindly ask that the rejections be withdrawn.

The claims are rejected under 35 USC 103(a) over Sakon et al., US 5,077,142 in view of Schomaker et al., in J. Org. Chem., Vol. 66, p 7125-7128 (2001) and in further view of Fink, US 6,352,791.

Applicants respectfully traverse the rejections.

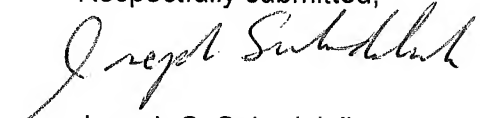
Applicants respectfully refer to the discussion above regarding Sakon and Schomaker. In addition, Applicants respectfully point out that the data of the afore mentioned Declaration specifically shows that triazines and pyrimidines demonstrate significantly different efficiencies in EL devices. Applicants therefore submit that one can not sufficiently rely on the triazines of Fink to suggest the instant pyrimidines when the instant pyrimidines are shown to be surprisingly more efficient.

Applicants therefore respectfully submit that the rejections under 35 USC 103(a) over Sakon et al., US 5,077,142 in view of Schomaker et al., in J. Org. Chem., Vol. 66, p 7125-7128 (2001) and in further view of Fink, US 6,352,791 as they might apply to the instant claims are addressed and are overcome and kindly ask that the rejections be withdrawn.

The claims are rejected on the grounds of non-statutory obviousness type double patenting over co pending Application Number 11/587,691. Applicants will provide a terminal disclaimer over commonly assigned Application Number 11/587,691 if still necessary upon the resolution of all other pending issues involving the instant application.

Applicants respectfully submit that all objections and rejections are addressed and are overcome and kindly ask that they be withdrawn and, pending the filing of appropriate disclaimers, claims 46-62 be found allowable. In the event that minor amendments will further prosecution, Applicants request that the examiner contact the undersigned representative.

Respectfully submitted,



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Attachments: Substitute specification